Unit title	Unit 12: IT Technical Support and Management
Guided learning hours	60
Number of lessons	30
Duration of lessons	2 hours

Key to learning opportunities			
IA	Internal assessment	**RS**	Revision session
GS	Guest speaker	**V**	Visit
IS	Independent study	**C**	Classroom activities directed by teacher

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Lesson	Topic	Lesson type	Suggested activities	Resources
Learning aim A: Examine the IT system support and management needs and characteristics of different organisations, which are essential to their operation				
1	**A1 Purpose and nature of IT system support and management**	IS C	• **Lead-in:** Introduce learners to the unit content and relevance to potential future work roles. Give learners an overview of the assessments. • **Tutor-led discussion:** Facilitate a brainstorming session on system support and management activities. **Tutor presentation:** Talk about what day-to-day system support and management tasks involve. • **Paired/small-group activity:** Learners should plan a typical day in the life of a system manager. They should retain notes and research for future use. Learners could also interview the centre's own System Manager, in the first instance, to explore some of the challenges that may not be included in a standard job description. • **Plenary:** Learners should share their findings from the activity and receive feedback from their peers. Summarise the lesson and use Q&A to establish learners' understanding. Learners should start to	• Dry wipe board for brainstorming session.

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			identify suitable questions for the guest speaker who is visiting in the next lesson (and continue this as homework).	
2	**A1 Purpose and nature if IT system support and management**	IS GS	• **Lead-in:** Finalise learners' questions for the guest speaker. • **Tutor presentation:** Explain any system support and management tasks not covered in the last lesson, such as security procedures, and drive and network management. • **Guest speaker:** Building on the interview with the centre's own System Manager in the previous lesson, an IT manager from a local business should visit the lesson to talk about a typical day in the life of a system manager. Learners should ask their prepared questions. One of these questions should ideally ask the guest the type of challenges they face and the frequency with which they face them. • **Tutor-led discussion:** Initiate a discussion about the guest speaker session. Talk about what a system manager job really involves.	• Note pads/pens for taking notes on session from guest speaker. • Computers with internet connection, for research.

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			• **Independent learning activity:** Learners should research system manager job descriptions using job adverts. They should identify the types of qualifications needed for this type of role. • **Plenary:** Learners should share their findings from the activity and receive feedback from their peers. Summarise the lesson and use Q&A to establish learners' understanding of the activities involved in managing a live system.	
3	**A2 Safe working practices in IT support and management**	IS	• **Lead-in:** Initiate a discussion about working safe when support IT systems. • **Tutor presentation:** Explain the safe working practices for the use and care of IT equipment, for example dealing with health and safety hazards. • **Independent learning activity:** Learners should research local regulations and IT support-related health and safety hazards. • **Plenary:** Learners should share their findings from the activity and receive feedback from their peers.	• Computers with internet connection, for research.

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4	**A3 Job roles in IT technical support and management**	IS	• **Lead-in:** Initiate a discussion about the different job roles in this field. • **Independent learning activity:** Learners should research the requirements and roles of IT technical support jobs as outlined in the unit content. • **Plenary:** Learners should share their findings from the activity and outline which job role they would prefer.	• Computers with internet connection, for research.
5	**A4 System and network support and management tools**	IS	• **Lead-in:** Initiate a brainstorming session on the variety of systems that need to be managed (e.g. servers and virtual PCs, cloud storage, mobile devices, laptops, desktops and bring your own devices (BYODs)). What different challenges do they represent? • **Tutor presentation:** Introduce network management tools, as listed in the specification, such as performance monitoring and management tools, provision of user desktop computing, tools to create and remotely deploy desktop disk images, asset management, and remote desktop access and control.	• Dry wipe board for brainstorming session and lesson notes. • Computers with internet connection, for research.

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			• **Individual activity:** Learners should research network management tools and how they can be used. They write up notes which they should retain for future use. • **Tutor-led discussion:** Learners should share their findings from the activity and receive feedback from their peers. • **Plenary:** Initiate a discussion on future gazing. Could all system management tasks eventually be automated? Summarise lesson and use Q&A to establish learners' understanding.	
6-8	**Assignment 1 Learning aim A**	IA	• **Assignment writing:** learners should work independently on Assignment 1 (further work will be needed on this outside of the classroom).	Assignment 1.
Learning aim B: Carry out routine support and management activities on IT systems				
9	**B1 Management of user support requests**	GS IS	• **Lead-in:** Finalise learners' questions for the guest speaker and brief learners on what the guest speaker will be focusing on. • **Guest speaker:** IT manager from the school/college or a local business to talk about, and possibly	• Note pads/pens for taking notes on session

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			demonstrate, their user support request reporting system. Learners ask prepared questions. • **Tutor-led discussion:** Learners should share feedback on the guest speaker session. Discuss how users can be supported. • **Tutor presentation:** Fill in any gaps about managing user support requests and ensure that all the specification points have been covered. • **Plenary:** Pose the question `How can you avoid trivial user questions taking up too much time/resources?'	from guest speaker.
10	**B2 Routine support activities**	IS C	• **Tutor presentation:** Introduce the practical tasks in this learning area. Discuss and demonstrate ways of carrying out routine support activities. **Paired/small-group practical activity:** Learners should start work on carrying out simple support activities, for example configuring a device, complete a backup and restore, upgrade some hardware, install a peripheral device. • **Plenary:** Share feedback on the activity.	• Computers for practical tasks.

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11	**B3 System management and implementation activities**	IS C	• **Lead-in:** Introduce the topic area. • **Tutor presentation:** Introduce the practical tasks in the learning aim. Discuss and demonstrate ways of monitoring system usage and interpreting results. • **Paired/small-group practical activity:** Learners should start work on setting up a networked system to simulate management and support activities, working both client and server side. To set up such a system, learners should be able to analyse what currently exists. • **Plenary:** Share feedback on the activity. Use Q&A to establish learners' understanding of the system set-up.	• Computers for practical tasks.
12	**B3 System management and implementation activities**	IS C	• **Lead-in:** Recap practical tasks and review progress. • **Paired/small-group practical activity:** Learners should complete the setting up of networked system and install/update applications. • **Plenary:** Share feedback on the activity. Use Q&A to establish learners' understanding of the system set-up.	Computers for practical tasks.

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13	**B3 System management and implementation activities**	IS C	• **Lead-in:** Recap practical tasks and review progress. • **Paired/small-group practical activity:** Learners should configure disks, create network shared drives, set permissions on folders, etc. • **Plenary:** Share feedback on the activity. Use Q&A to establish learners' understanding of disk configuration.	• Computers for practical tasks.
14	**B4 Performance of IT systems – Security optimisation**	IS C	• **Lead-in:** Initiate a brainstorming session about how it is possible to optimise security. Ensure that the points in the specification are covered, i.e. firewalls and access control rules, latest patches and known vulnerabilities, device hardening and management of systems permissions. • **Tutor-led practical demonstration:** Demonstrate how to adjust security settings. • **Paired/small-group practical activity:** Following the practical demonstration, learners should undertake practice tasks involving adjusting security settings. • **Plenary:** Use Q&A to establish learners' understanding of security optimisation.	• Dry wipe board for brainstorming session and lesson notes. • Computers for practical tasks.

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15	**B4 Performance of IT systems – Traffic optimisation & improving system performance**	IS C	• **Lead-in:** Initiate a brainstorming session about the different methods of checking performance and stress testing the system. Cover the points listed in the specification. • **Paired/small-group practical activity:** Learners should carry out stress testing and performance optimisation of the system. • **Tutor-led discussion:** Share feedback on the activity. Discuss different options for performance optimisation. • **Plenary:** Have a Q&A session on any issues that learners need support on relating to learning aim C.	• Dry wipe board for brainstorming session and lesson notes. • Computers for practical tasks.
16	**B5 Personal behaviours**	IS C	• **Lead-in:** Initiate a brainstorming session about the personal behaviours required when providing IT technical support. • **Paired/small-group practical activity:** Learners should carry out a skills audit to identify their own skills and knowledge for IT technical support.	• Dry wipe board for brainstorming session and lesson notes. • Computers for practical tasks.

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			• **Tutor-led discussion:** Share feedback on the activity. Discuss different skills, knowledge and behaviours required for providing IT technical support. • **Plenary:** Have a Q&A session on any issues that learners need support on relating to learning aim C.	
17-20	**Assignment 2 Learning aim B**	IA	• **Assignment writing:** learners should work independently on Assignment 2 (further work will be needed on this outside of the classroom).	• Assignment 2.
Learning aim C: Develop a plan to support and manage a new IT system using industry standards and methods				
21	**C1 IT systems diagrams**	IS C	• **Lead-in:** Facilitate a discussion about the uses of IT systems diagrams. • **Tutor-led discussion:** Discuss/show different IT system diagrams as outlined in the unit content. • **Independent learning activity:** Learners should research different IT systems diagrams to fully understand what they are showing. • **Plenary:** Summarise the lesson and use Q&A to establish learners' understanding of the IT systems diagrams and how they can be interpreted.	• Dry wipe board for lesson notes. • Computers with internet connection, for research.

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22	**C2 Incident response and disaster recovery planning**	IS C	• **Lead-in:** Facilitate a discussion about what disaster recovery is. • **Tutor-led discussion:** Discuss situations where disaster recovery is needed and methods of providing disaster recovery. • **Independent learning activity:** Learners should research ways in which given organisations can develop disaster recovery plans to cover a range of threats. Retain notes and research for future use. • **Plenary:** Summarise the lesson and use Q&A to establish learners' understanding of disaster recovery. Encourage learners to take notes, as necessary.	• Dry wipe board for lesson notes. • Computers with internet connection, for research.
23	**C3 Capacity planning**	IS C	• **Lead-in:** Facilitate a brainstorming session about what needs to be planned for capacity in a system. • **Tutor presentation:** Explain disk space requirements, quotas and drive mappings. • **Paired/small-group practical activity:** Learners should complete an activity estimating disk space	• Dry wipe board for brainstorming session and lesson notes.

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			requirements, deciding on disk quotas, and planning shared and network drive set-up and mappings. • **Tutor-led discussion:** Learners should present their research to the class and receive feedback from their peers. Encourage learners to take notes, as necessary. • **Plenary:** Initiate a discussion entitled 'How much disk space is enough?' Do you need to restrict users' access to resources?	
24	**C4 Sustainability and environmental waste planning**	IS	• **Lead-in:** Facilitate a brainstorming session about what sustainability considerations in IT. • **Tutor presentation:** Explain environmental waste management when using IT. • **Paired/small-group practical activity:** Learners should complete a research activity on effective waste management when using IT, use real-life examples of company's waste management. • **Tutor-led discussion:** Learners should present their research to the class and receive feedback from their peers. Encourage learners to take notes, as necessary.	• Dry wipe board for brainstorming session and lesson notes. • Computers with internet.

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25	**C5 An IT technical support and management plan**	IS	• **Lead-in:** Facilitate a brainstorming session about what an IT technical support and management plan would consist of. • **Tutor presentation:** Explain what an IT technical support and management plan should consist of. • **Paired/small-group practical activity:** Learners should create and IT technical support and management plan for their school. • **Tutor-led discussion:** Learners should present their plan to the class and receive feedback from their peers. Encourage learners to take notes, as necessary.	• Dry wipe board for brainstorming session and lesson notes. • Computers with internet.
26-30	**Assignment 3 Learning aim C**	IA	• **Assignment writing:** learners should work independently on Assignment 3 (further work will be needed on this outside of the classroom).	• Assignment 3.